

WHAT IS CLAIMED IS:

1. In a process for packaging an electronic device comprising the steps of:
  - 5 preparing a printed wiring board which has wiring copper layers coated with a metal layer comprising a metal other than copper;
  - 10 coating the metal layer with an insulating protective resin layer, keeping an area for mounting an electronic device exposed;
  - 15 mounting the electronic device on the exposed area via an electroconductive material; and
  - coating the mounted electronic device and a portion of the insulating protective resin layer with an encapsulant;
- 20 an improvement in which the insulating protective resin layer is produced by employing at least one of the following resin compositions (1) to (3):
  - (1) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.5 to 30 weight parts of an epoxy compound having an epoxy equivalent of more than 800, and an organic solvent;
  - 25 (2) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 10 weight parts of an epoxy compound having an epoxy equivalent of 100 to 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent; and
  - 30 (3) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 20 weight parts of an epoxy compound having an epoxy equivalent of more than 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent.

2. The process of claim 1, wherein the metal layer comprises tin.

5 3. The process of claim 1, wherein the organic solvent-soluble resin is an organic solvent-soluble polyimide-siloxane.

10 4. The process of claim 3, wherein the organic solvent-soluble polyimide siloxane is produced by a reaction of a tetracarboxylic acid compound with a diamine compound comprising 30 to 95 mol.% of a diaminopoly-siloxane compound, 0.5 to 40 mol.% of an aromatic diamine compound having a polar group on an aromatic ring thereof and 0 to 69.5 mol.% of an diamine compound other than the 15 aromatic diamine compound.

5. The process of claim 1, wherein the resin composition contains a curing catalyst.

20 6. The process of claim 1, wherein the resin composition contains a filler.

25 7. The process of claim 1, wherein the resin composition is curable at a temperature of lower than 130°C.

30 8. A resin composition comprising a combination of 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 10 weight parts of an epoxy compound having an epoxy equivalent of 100 to 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent, or a combination of 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 20 weight parts of an epoxy compound having 35 an epoxy equivalent of more than 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic

solvent.

9. The resin composition of claim 8, wherein the organic solvent-soluble resin is an organic solvent-soluble polyimide-siloxane.

10. The resin composition of claim 9, wherein the organic solvent-soluble polyimide siloxane is produced by a reaction of a tetracarboxylic acid compound with a diamine compound comprising 30 to 95 mol.% of a diamino-polysiloxane compound, 0.5 to 40 mol.% of an aromatic diamine compound having a polar group on an aromatic ring thereof and 0 to 69.5 mol.% of an diamine compound other than the aromatic diamine compound.

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11. The resin composition of claim 8, which further contains a curing catalyst.

20. The resin composition of claim 8, which further contains a filler.

13. The resin composition of claim 8, which is curable at a temperature of lower than 130°C.

25. A cured resin material which is produced by curing at least one of the following resin compositions (1) to (3) for producing:

30. (1) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.5 to 30 weight parts of an epoxy compound having an epoxy equivalent of more than 800, and an organic solvent;

35. (2) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 10 weight parts of an epoxy compound having an epoxy equivalent of 100 to 800,

2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent; and

5       (3) a resin composition comprising 100 weight parts of an organic solvent-soluble resin having a polysiloxane skeleton and a polar group, 0.1 to 20 weight parts of an epoxy compound having an epoxy equivalent of more than 800, 2 to 30 weight parts of a polyvalent isocyanate compound, and an organic solvent,

10      and which shows no glass transition temperature of higher than 160°C.

15      15. The cured resin material of claim 14, wherein the organic solvent-soluble resin is an organic solvent-soluble polyimide-siloxane.

16. The cured resin material of claim 15, wherein the organic solvent-soluble polyimide siloxane is produced by a reaction of a tetracarboxylic acid compound with a diamine compound comprising 30 to 95 mol.% of a diaminopolysiloxane compound, 0.5 to 40 mol.% of an aromatic diamine compound having a polar group on an aromatic ring thereof and 0 to 69.5 mol.% of an diamine compound other than the aromatic diamine compound.

25      17. The cured resin material of claim 14, which further contains a curing catalyst.

18. The cured resin material of claim 14, which further contains a filler.

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